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4. *Consulting Reports* are prepared upon completion of consulting action requested under HumRRO's Technical Advisory Services. They are intended for a specific military audience and usually contain guidelines for implementation.

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Technical Reports and Research Bulletins may be requested from the Director's Office, which also issues a complete bibliography. Other publications may be obtained from the Director of Research of the originating Unit or Division.

6  
REPORT ON  
TECHNICAL ADVISORY SERVICES  
FOR FISCAL YEAR 1963

by  
10 J.C. Rupe,  
Adviser for Technical Advisory Services

11 March 1964

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## INTRODUCTION

### Purpose of Technical Advisory Services

The Department of the Army and the Human Resources Research Office have long recognized that HumRRO has a considerable value, and potential for value, to the Army beyond its formal reports of completed research and the pertinent recommendations resulting from research. The most direct and immediately recognized value grows out of assistance given to the agencies that implement recommendations after the related research Task has been completed. The potential value resides in the extensive body of knowledge, experience, and skills in the behavioral sciences possessed by the professional staff that can be applied with benefit to many operational activities where time or the nature of the problem does not permit a research approach. As will later be explained in more detail, this report consists of tabular presentations of Technical Advisory Services (TAS) activities and Action Briefings during the Fiscal Year (FY) 1963.

### Background

Before the beginning of FY 1962, assistance outside the formal program of research Tasks given to operational agencies of the Army was accounted for under the heading of "consulting." It was recognized as an essential and legitimate expenditure of professional time but not to the extent that basic man-years were allotted for it in the formal work program. In a sense, time for consulting was "stolen" from time programmed for research Tasks.

In the preparation and approval of the Work Program for FY 1962, it was decided that a more formal recognition of and provision for technical advisory services were both required and justifiable. An Advisor for Technical Advisory Services was appointed and physically located in Headquarters, U.S. Continental Army Command (USCONARC), and a total of seven basic man-years was programmed for the Training Methods Division (TMD) and the five Human Research Units. It was anticipated that, as in the past, TAS would fall into two principal categories, implementation and consultation, defined as follows:

**Implementation:** Those formal and informal, coordinated Army-HumRRO activities designed to assist the Army in gaining the full benefit of HumRRO research.

**Consultation:** Activities less formal than implementation, offered on request, and designed to assist the Army by providing data, information, or advice based on the competence of HumRRO personnel.

### Implementation

Implementation frequently takes place during the conduct of research Tasks and their related subtasks. For example, the product of one subtask, required for the conduct of subsequent subtasks, might be a thorough analysis of a Military Occupational Specialty (MOS). While the analysis is used primarily for this purpose, it may also be used for other purposes by the school or center concerned with training in the Specialty.

During the active lifetime of a research Task, time for implementary services is charged to the Task. Ordinarily, description of such activities would not appear in this report. Exceptions are made, however, where aid has been given to a sister service, as in the case of the Navy (see Table 2) where funds were supplied to obtain the assistance, and where knowledge gained in conducting the research was requested to aid related efforts by other agencies. With the approval and distribution of the final reports the Task is completed, the Task account is closed, and no further charges may be made. This is frequently the time when extensive assistance may be required to implement the over-all recommendations. Once implemented, it may also be helpful to review periodically the current operation of the research-based activity, and to propose modifications where appropriate. In this manner HumRRO assists the Army in maintaining the operational efficiency and effectiveness of the research product.

### Consultation

Personnel who participate in the HumRRO research program must have competence in a wide variety of skills and techniques. This capability is developed by formal education through graduate levels, and increases with experience gained through research in specific Tasks. Some of the skills, techniques, and procedures in the scientist's repertoire are those required in planning the conduct of scientific research; in collecting data (building questionnaires, rating forms, etc.); in analyzing the data and presenting it logically and statistically; in evaluating training methods and devices; and in making evaluations of materiel, from the human factors point of view.

There are many operational questions requiring quick answers where the application of these skills could assure more effective results. A great many consultations with HumRRO personnel take so short a time—a half hour to an hour—that preparing a formal report may take more time than the consultation. Yet, by a transfer of knowledge, the requester may be set on the right path so that he can proceed directly to his goal. Experience gained in the conduct of research in a specific area may provide answers to questions in related areas. Research by-products may also be applicable in areas other than those for which they were designed. As another example, answers to the questionnaires that are sent out for field evaluation of training-course graduates may prove useful when combined and analyzed. To make these answers valid, the questionnaires may need modification, and here again expert advice is helpful.

Sometimes the consultation may be fairly extensive and significant enough to warrant the publication of a Consulting Report. As an example, the materials prepared to conduct workshops in programmed instruction for the Army were found suitable for reference texts. They were bound and distributed for use by other agencies in the conduct of their own workshops and for use by beginning programmers in preparing programs. Three Consulting Reports are listed in Tables 3, 6, and 7 of this report, even though the Tasks are still active. According to fiscal accounting procedures, these should properly be charged to the parent Task rather than to TAS. They are included, however, because they represent a service to the Army. For the purposes of this report, however, strict fiscal accounting procedures need not prevent the inclusion under TAS of the services represented by these Consulting Reports, which are truly advisory in nature.

#### Technical Advisory Services for Fiscal Year 1963

TAS provided by the Director's Office is, in a sense, a continuing activity. During this year the newly appointed Advisor for TAS at Headquarters, USCONARC, responded to requests for publications, for advice, and for information of all kinds related to HumRRO work. He arranged for briefings on current research, and for implementary actions. In addition, a continuing stream of visitors came to the Director's Office with requests for publications, coordination, and data. Some of this may be considered merely the ordinary conduct of business in a research agency. However, many requests for assistance and for briefings for Allied military and professional personnel, coordinated through the Office of the Chief of Research and Development, are considered TAS in that they tend to support the interests of the Army. The same is true of such requests from the other military departments and the Department of Defense.

Some examples of TAS activities in the Director's Office follow:

Continuing from the previous fiscal year and carrying on into the first quarter of FY 1963, Dr. S.J. Goffard, Advisor on Psychological Research Methods, visited and deliberated with personnel of the U.S. Army Special Warfare Center (USASWC) on the subject of learning radio code. Drawing on past research results, he made recommendations which were adopted to improve the efficiency and effectiveness of the training. This TAS was performed at the request of Headquarters, USCONARC and USASWC.

In October 1962, Dr. W.L. Williams, Jr., HumRRO, Col. D. Cooper, and Lt. Col. F.J. Michaelson consulted with Training Command, U.S. Atlantic Fleet (TRALANT) Navy, concerning functional context training (FCT), a product of past HumRRO research in Tasks REPAIR and LIMIT, for the Army. This resulted in recommendations from TRALANT to the Chief of Naval Personnel for modification of a certain engineering/advisory service contract with a civilian firm. The contract was to incorporate the requirement for the essential FCT procedures to be used by the firm to assist the Fleet Sonar School, Key West, in developing its training program.

Beginning in May and continuing beyond the end of the fiscal year, at the request of the U.S. Army Research Office (ARO), imple-  
mentary assistance was given by Dr. W.A. McClelland, Deputy Director,  
General Operations and Personnel, Dr. J.C. Rupe, Advisor for TAS,  
and Dr. A.J. McKnight, Senior Scientist (TMD), toward carrying out  
the recommendations of Task UPSTREAM. As this assistance included  
the proposal to use documents developed under Exploratory Study  
"System," TMD and the Air Defense Human Research Unit participated  
with the Director's Office in providing this TAS. As members of an  
ARO committee, the HumRRO personnel served with those from the  
U.S. Army Personnel Research Office, Human Engineering Laboratories,  
and Army Materiel Command planning the "operational test" of the  
Integrated Man-Machine Research and Development (IMMRAND) con-  
cept in new weapon-system development.

Following are tabular presentations of the TAS activities of the  
HumRRO Divisions and Human Research Units and a tabular presen-  
tation of Action Briefings conducted during FY 1963, although by defi-  
nition these Briefings are not TAS. This report is designed to convey  
a feeling for the scope, importance, and variety of activities in which  
HumRRO personnel have participated. Reports of the subject matter  
of TAS were separate from fiscal accounting, and time expended was  
not always indicated on the reports that are summarized here. If  
time was reported, it has been, where possible, combined to represent  
the total amount expended by all personnel.

Some TAS activities have been individually reported because of  
factors such as extensive amount of time expended, amount of work  
done, or significance. Others have been grouped together because they  
dealt with the same topic, have continued over a period of time, and  
have been the subject of several reports. Still others have been  
grouped together because they have often been accomplished in one day  
or less, even though individually they may have importance for the  
requesters or significance in time saving, prevention of false starts,  
improvement of effectiveness, and so forth. To report each of the  
myriad contacts would probably have bogged down the reader in exces-  
sive detail and detracted from the interest of this report.



**TABULAR PRESENTATION OF TECHNICAL ADVISORY SERVICES  
AND ACTION BRIEFINGS  
BY HUMRRO DIVISIONS AND UNITS**

**1 July 1962 - 30 June 1963**

**Tables 1 - 8**

Table 1

## Training Methods Division

Task or Activity	Nature of TAS	Requesting Agency	Date	Advisory Personnel	Time Expended (days)
FORECAST	FORECAST assistance to U.S. Navy	COMTRALANT	Mar-Jun 63 (Continuing into FY 64)	Dr. Shriver Mr. Trexler	42
	<p>Objective: To train Navy instructors to conduct the FORECAST type of training with FORECAST manuals for the LORAN AN/UPN-12 and AN/UPN-15 systems.</p> <p>Outcome: The FORECAST concept (manuals and training) is being implemented at the Fleet Training Center in training personnel for the Atlantic Fleet and generating performance data on graduates; performance will be compared with that of graduates of the conventional course.</p>				
FORECAST	Briefing	USASCS	Sep 62	Dr. Shriver	1
	<p>Objective: To brief USASCS personnel on the FORECAST concept of electronics maintenance manuals and training as developed for the OrdCorps.</p> <p>Outcome: Discussion of how the concept would fit or could be tailored to electronics maintenance in the SigC.</p>				
FORECAST	Assistance in preparing FORECAST analysis	USAOMC	Nov-Dec 62	Dr. Shriver Mr. Trexler	12
	<p>Objective: To assist the USAOMC in preparing a FORECAST analysis of the Hawk missile test set to be used as a field change to the Technical Manual. The manufacturer's documentation in the Technical Manual was deemed inadequate by the USAOMC.</p> <p>Outcome: A FORECAST analysis of the Hawk missile test set was conducted, documentation was prepared, and the errors and inadequacies of the manufacturer's documentation were specified. The package was presented to the USAOMC for use as a change order to the existing Technical Manual.</p>				
Not Task-Related	Identification of course material amenable to PI.	USASWC	Mar 63	Dr. Hoeft Dr. Seidel Dr. Fick	16
	<p>Objective: To examine training content of courses at the USASWC and USASWS; to identify what would be amenable to PI.</p> <p>Outcome: A memorandum, "Suggestions for Application of Programmed Instruction to SWC and SWS Training," was submitted to the Center. The purpose of this memorandum was to assess potential gains through the application of PI, to identify course content material most amenable to PI, and to suggest an approach for initial application of PI.</p>				

(Continued)

Table 1 (Continued)

## Training Methods Division

Task or Activity	Nature of TAS	Requesting Agency	Date	Advisory Personnel	Time Expended (days)
Not Task-Related	Guidance on training of low-aptitude personnel.	USASCS	Jun 63	Dr. Lyons Dr. Vineberg Dr. Shriver Dr. MacCaslin Dr. Seidel Mr. Trexler	2
<p>Objective: To provide information relevant to the training of low-aptitude personnel for Dr. Vincent Cieri, Educational Advisor, USASCS.</p> <p>Outcome: Dr. Cieri was briefed on the current work program of TMD and discussed his problem with various members of the Division. He was given potentially relevant documents from Tasks METHOD, LIMIT, FORECAST, JOBTRAIN, and SHOCKACTION.</p>					
JOBTRAIN	Field Test by School of JOBTRAIN Course.	USASECS	Jan-Jun 63 (Continuing into FY 64)	Mr. Gebhard	38
<p>Objective: To assist USASCS personnel in the development of an experimental course for training radio repairmen in accordance with JOBTRAIN methods.</p> <p>Outcome: Assistance was rendered in construction of lesson plans and printing of job aids. Training commenced in Mar 63.</p>					

Table 2

Training Methods Division and Language and Area Training Division<sup>a</sup>

Task or Activity	Nature of TAS	Requesting Agency	Date	Advisory Personnel	Time Expended (days)
Not Task-Related	Language Training in the Orientation and Career Course, U.S. Army Talor Program, Phase I.  Objective: To evaluate a language training program plan to prepare career officers for urgent and unpredictable overseas assignments. This language program called for the training to be added to the Orientation and the Career Courses at each Service School.  Outcome: A report was prepared reviewing this program and comparing its likelihood of success with the estimated costs and magnitude of the undertaking. Ways of coping with major problems that would be met in implementing the plan were suggested. Subsequent to the preparation of this review, however, program implementation was deferred, pending further study and the availability of funds.	USCONARC, under direction of ODCSOPS	Sep-Dec 62	Dr. Rocklyn Dr. Fika Dr. Garvey Dr. McGrady	31
Not Task-Related	Vietnamese Language Training Program at the U.S. Army Special Warfare Center, Fort Bragg.  Objective: To provide military personnel assigned to Vietnam with some minimal exposure to Vietnamese, when circumstances made it impossible to utilize existing Army language training facilities.  Outcome: After review of the existing Vietnamese language program, an interim recommendation was made regarding the more effective use of resources at Fort Bragg. The feasibility of a brief, self-instructional course in Vietnamese, recommended by OGRD to be developed for Vietnamese assignments, was investigated. The outcome was the establishment of HEMPRO Task MALT, with the objective of developing, as recommended, a brief, self-instructional course in Vietnamese, aimed at providing language skill for personnel assigned to Vietnam, when schedules do not permit formal language training.	USCONARC (Requirement levied by Maj. Gen. Clark, ARO)	Nov 62	Dr. Rocklyn Dr. Fika Dr. Garvey	48
Not Task-Related	Comparison of two language aptitude tests, the Modern (MLAT) and the Army (ALAT) Language Aptitude Tests.  Objective: To obtain technical information that could be used as a basis for deciding which of these two aptitude tests should be standardized for use in the foreign language training programs of the DOD.  Outcome: A report of the relative effectiveness of these tests was prepared. The report provided a technical basis for the decision of the DLI to utilize the ALAT as the standardized test in the DOD language training program. Detailed estimates of the operational and economic savings to be effected by using this test will be provided in the near future by the DLI.	HQ DLI	Mar-Jun 63	Dr. Rocklyn Dr. Leedy Dr. McGrady	45

(Continued)

Table 2 (Continued)

## Training Methods Division and Language and Area Training Division

Task or Activity	Nature of TAS	Requesting Agency	Date	Advisory Personnel	Time Expended (days)
Not Task-Related	Consultation and review of programmed texts on nuclear weapons and their effects.  Objective: To review a programmed text on nuclear weapons and their effects.  Outcome: After reviewing the programmed text, recommendations were made in regard to changes and additions. The programmed text was revised in accordance with the recommendations, and subsequent notification was received from the USAF Reserve, attesting to the increased efficiency of text usage.	USAF Reserve, Andrews AFB	Jul-Aug 62	Dr. Rocklyn	3
Not Task-Related	Observations and Recommendations concerning technical training in the Chinese Army.  Objective: To provide recommendations for improving technical training employed by the Chinese Nationalist Army, Taiwan, as requested. This service was in actuality a by-product of a trip to Taiwan, accomplished in connection with Exploratory Study Map.  Outcome: A report of on-the-scene observations, with recommendations, was furnished the Assistant Chief of Staff for Personnel of the Chinese Nationalist Army. The Commander-in-Chief subsequently approved the recommendations which were then reflected in official directives issued by the General Staff to all Army Service Schools for guidance and for improvement of training methods.	The Chinese Nationalist Army	Oct-Nov 62	Dr. Brown	1
Not Task-Related	Estimation of foreign-language-speaking proficiency of large numbers of Armed Forces personnel.  Objective: To facilitate an empirical examination of the feasibility of using the machine-scorable Army Language Proficiency Test to estimate levels of speaking proficiency.  Outcome: Data collected from two recent classes of language school graduates in several language departments at the DLI, WGB are currently being analyzed. A report reflecting the findings will be sent to DLI, WGB.	HQ-DLI; DLI, WGB	Jun 63	Dr. Leedy Dr. McCrary	20

(Continued)

Table 2 (Continued)

## Training Methods Division and Language and Area Training Division

Task or Activity	Nature of TAS	Requesting Agency	Date	Advisory Personnel	Time Expended (days)
Not Task-Related	Planning of data collection procedures for DLI, WCB.  Objective: To advise on a quality control system approach, primarily geared to the collection and collation of data for the purpose of monitoring the progress of language training.  Outcome: A review of some pertinent systems literature and of the current data collection and storage system at DLI, WCB has been completed. A paper coincident with the stated objective is in preparation.	HQ DLI; DLI, WCB	Jun 63	Dr. Leedy	24
Not Task-Related	Problems in cross-cultural technical assistance.  Objective: To provide the Civil Affairs School with some resource material on the problems and socioeconomic developments experienced in the process of rendering technical assistance in cross-cultural civic actions.  Outcome: A collection of illustrations of problems in cross-cultural technical assistance, furnished (unsolicited) to the Civil Affairs School, was gratefully acknowledged by the Commandant. The material is believed to have been subsequently utilized as training content by school instructors.	U.S. Army Civil Affairs School, Fort Gordon	Jun 63	Dr. Foster SP Nelson	1
Not Task-Related	Problems in Language Training and Evaluation.  Objective: To review special problems involved in measuring foreign-language speaking proficiency, language aptitude testing, research needs, and data retention at the DLI, WCB.  Outcome: A report was prepared giving consideration to each of the problems. The report provided a basis for further collaboration between DLI, WCB and HUMPRO.	DLI, WCB	Apr-May 63	Dr. Leedy Dr. McCrary	25

\*The Language and Area Training Division was activated on 1 April 1963, composed in part of personnel with language research tasks from TMD, and personnel from the Special Warfare Group (D.O.).

**Table 3**  
**U.S. Army Armor Human Research Unit**

Task or Activity	Nature of TAS	Requesting Agency	Date	Advisory Personnel	Time Expended (days)
Not Task-Related	Preparation of training manual on "The MII Relationship."	Brig. Gen. Dobson, Asst. Comdt., USAARMS	Nov 62	Dr. Cannon	
VE-TRAIN	Revision of Organizational Vehicle Maintenance (MOSs 631, 632) to MOS 631; review of POIs.	USCONARC	Sep 62-Feb 63 (Continuing)		
Not Task-Related	Assistance in revision of "The Tank Gunner's Guide (Tank, 105-mm Gun, M60)" TC 17-9.	USAARMS	Feb 63		
Not Task-Related	Preparation of BCT questionnaire.	USATC, G-3, Armor	Apr 63	Dr. Whitmore Dr. Cannon	10
Not Task-Related	Service on Ad Hoc Committee to examine BCT to align it with needs of basic soldier. Review of ATP 21-114.	USCONARC	May 63	Dr. Whitmore, ADHUR Dr. Taylor, LHRU Dr. Snyder, LHRU Dr. Showel, LHRU Dr. Ward, LHRU Dr. Cox, ADHUR	5
Not Task-Related	Preparation of CR, "Status Report of Research on Problems of Crew Fatigue."	USACDC, Armor Agency	(Continuing)	Dr. Cannon	
Shillelagh	(1) survey of developing agencies to obtain task and skill information on crew operation and user maintenance. (2) conferences with the Army Participation Group, USNTIC, on proposed modifications of requirements for devices. (3) relay of information to the USAARMS and the USAARMC for the preliminary planning of training. (4) relay of information to the Program Manager's Office, Rock Island Arsenal for use in planning MET and training equipment development.	USCONARC	(Continuing)	Dr. Haggard	60

(Continued)

Table 3 (Continued)

## U.S. Army Armor Human Research Unit

Task or Activity	Nature of TAS	Requesting Agency	Date	Advisory Personnel	Time Expended (days)
Shillelagh (Continued)	(5) relay of information to USCONARC for the planning of training programs on operational and maintenance skills.				
Mod X Cupola for T-114	(1) a discussion of the following problems with General Electric representatives on a GE proposal for a power-driven command cupola: (a) human factors pertaining to the design of the control and viewing systems of the turret, and; (b) human capabilities pertaining to operational and training requirements. (2) consultations at USACDC, Armor Agency on human capabilities as they pertain to the Mod X Cupola. (3) participation in a preliminary evaluation of a proposed power system for the Mod X at Erie Proving Ground. (4) participation in an operational test of the manual system of the Mod X, conducted by the Armor Board.	USAARMCDA; USAARMBD	FY 63	Dr. Haggard	20
Not Task- Related	The driver-in-the-turret concept. Advice was provided for the human factors analysis of the driver's compartment of an experimental tank turret. A human factors review was written, in connection with a test of the concept conducted by the Armor Board.	USAARMBD	(Continuing)	Dr. Haggard	40

(Continued)



Table 3 (Continued)

## U.S. Army Armor Human Research Unit

Task or Activity	Nature of TAS	Requesting Agency	Date	Advisory Personnel	Time Expended (days)
Not Task-Related	Evaluation of flash localization performance of tank gunners: (using a new grid-type reticle graduated in hand-crank and pump-assembly turns), begun in FY 62, was continued jointly by Unit and Armor School personnel. Eighteen subjects were tested under experimental conditions in darkness; gun flashes were simulated. A field evaluation of the flash localization performance of tank gunners was then conducted. A report of the experimental work was read at the APA. (Preparation and staffing of the report and additional data analysis were continued into FY 64.)	USCONARC	FY 62 FY 63 (Continuing into FY 64)	Dr. Easley	40

Table 4

## U.S. Army Leadership Human Research Unit\*

Task or Activity	Nature of TAS	Requesting Agency	Date	Advisory Personnel	Time Expended (days)
NCO	Conduct of Leader Preparation Faculty Training School for faculty of Fort Polk ATC. Visits to LPSs at Forts Knox, Jackson, Gordon, and Polk.	USCONARC	Jul 62	Dr. Hood	23
NCO	Modification of Leader Preparation course for WAC.	USCONARC	Sep-Dec 62	Dr. Hood	
RAID I	Long-range reconnaissance patrol training and operation in USAREUR.	Seventh Army, G-2	Sep-Dec 62		
Not Task-Related	Briefing consultation for Brig. Gen. Wm. W. Bensell, Jr., Academic Dean, USMA.		Aug 62	Dr. Taylor Col. Green Gen. Sebree	
RAID I	Preparation and publication of CH, "Summary of Human Factors Relevant to the Training of Long-Range Reconnaissance Patrol Companies in the Seventh Army" (For Internal Use Only).	Seventh Army, G-2	Jan 63	Dr. Murphy Dr. Smith Mr. Wheeler	
Not Task-Related	Service on Ad Hoc Committee to examine BCT to align it with needs of basic soldier.	USCONARC	May 63	Dr. Taylor, LHRU Dr. Snyder, LHRU Dr. Showel, LHRU Dr. Ward, LHRU Dr. Cox, ADHRU Dr. Whitmore, AHRU	12
Not Task-Related	Briefing to staff of USAINTC	USAINTC	Sep 62	Dr. Bialek	1
Not Task-Related	Survey of problem areas in which human factors research might be undertaken; survey of research facilities and ongoing human factors research.	HQ USARA	Sep 62	Dr. Kern Dr. Berkun	10

(Continued)

\*As of 1 Oct 63, U.S. Army Training Center Human Research Unit.

Table 4 (Continued)

## U.S. Army Leadership Human Research Unit

Task or Activity	Nature of TAS	Requesting Agency	Date	Advisory Personnel	Time Expended (days)
Not Task-Related	Study on trends of several variables relating to USALS training mission; study on relationship between ALAT and training accomplishment.	USALS	FY 63	Dr. Caylor Dr. Fox	74
Not Task-Related	Assistance on leadership course.	USMA	Feb 63	Gen. Sebree	2

Table 5  
U.S. Army Infantry Human Research Unit

Task or Activity	Nature of TAS	Requesting Agency	Date	Advisory Personnel	Time Expended (days)
Not Task-Related	Critique and consultation on "A Study to Conserve the Energy of the Infantryman."	USAIGDA	Mar 63	Col. Kelly	1
Not Task-Related	Conference concerning coordination of activities between IIRU and USAIGDA.	USAIGDA	Mar 63	Dr. Lange Col. Kelly Capt. Tom	
RIFLEMAN V	Consultation on production of Army training film to supplement Advanced Land Navigation Program.	Special Subjects Dept., USAIS	Sep-Nov 62 (Continuing)	Mr. Powers	2
RIFLEMAN V	Consultations on Advanced Land Navigation Program with Map Reading Committee.	Special Subjects Dept., USAIS	Dec 62- Jun 63 (three meetings)	Dr. Nichols Mr. Powers	
Not Task-Related	Consultations on and instruction in the methods of programmed instruction.	Editorial Advisor, USAIS, Office of Coordinator of Instruction	Jan-Jun 63 (Continuing; seven meetings)	Dr. Lange Dr. Jacobs Mr. McCrystal	
Not Task-Related	Comments on draft FM-23, "Technique of Fire of the Rifle Squad and Tactical Application."	USAIS	Nov 62	Col. Kelly	
Not Task-Related	Analysis and interpretation of data on relative effectiveness of several shooting positions at various ranges and under various time pressures; consultation on same subject.	Weapons Dept., USAIS	Jan-Mar 63	Dr. Jacobs	2
Not Task-Related	Review of proposed test of 90-mm recoilless rifle.	Weapons Dept., USAIS	Feb 63	Dr. Jacobs Col. Kelly	3
LEAD II	Preparation and briefing on IIRU and HUMRRO's work in PI for workshop for programmers being conducted at the USAIS.	USAIS	May 63	Dr. Jacobs Mr. McCrystal	14
Not Task-Related	Attendance at demonstration and conference on Hughes Aircraft Co., Laser Range Finder.	CDCIA	May 63	Dr. Nichols Col. Kelly Mr. Powers	1

(Continued)

Table 5 (Continued)

## U.S. Army Infantry Human Research Unit

Task or Activity	Nature of TAS	Requesting Agency	Date	Advisory Personnel	Time Expended (days)
Not Task-Related	Consultations on IIRU running man target for use in resident machinegun instruction.	Weapons Dept., USAIS; Chief, Engineering Division, Rock Island Arsenal	Feb. 63	Mr. Fooks Col. Kelly Mr. Waites Mr. Harris Mr. Elder	.5
LEAD	Preparation and presentation of briefing on Rifle Platoon Tactical Doctrine for Ranger Dept. instructors at conference.	Ranger Dept., USAIS	Mar 63	Col. Kelly	1.
OFFTRAIN IV LEAD	Consultation with Marine Corps School personnel regarding leadership training.	Marine Corps Schools, Quantico, Va.	Jan 63	Dr. Jacobs	.5
OFFTRAIN IV	Consultations with Chief of Staff TRALANT; supplied 100 copies of training package, <i>Basic Problems in Small Unit Leadership, Instructor's Guide, and Practical Exercises.</i>	C/S TRALANT, Bureau of Naval Personnel	Jul-Dec 62		
OFFTRAIN IV	Visits were made to various military installations where ROTC Units were undergoing their summer training to assist in implementation of OFFTRAIN IV.	USCONARC	Jul 62	Dr. Jacobs	17.5
Not Task-Related	IIRU personnel supplied comments on tactical doctrine, infantry requirements, and training implications at the CDCIA Weapons Conference.	CDCIA	Jun 63	Col. Kelly Lt. Col. Brown Mr. Powers	4.5

(Continued)

Table 5 (Continued)

## U.S. Army Infantry Human Research Unit

Task or Activity	Nature of TAS	Requesting Agency	Date	Advisory Personnel	Time Expended (days)
Not Task-Related	Consultations (24 of one day or less) concerning human factor problems, review of training materials, attending conferences, presenting training courses, evaluation of proposed products, etc. Subjects included were techniques of fire, night vision weapons sight, Army marksmanship program, combat reaction course, explosive foxhole digger, live night-fire problems in BCT, and U.S. Army Air Assault Division.	Agencies assisted were mainly USAIS such as Weapons Dept., Editorial Advisor, etc., but also included USAICDA, USMA, USAIB, CORG, and industry.	Jul 62-Jun 63 (Continuing)	All professional staff members participated in one or more.	

Table 6  
U.S. Army Air Defense Human Research Unit

Task or Activity	Nature of TAS	Requesting Agency	Date	Advisory Personnel	Time Expended (days)
TEXTRUCT II	Preparation and publication of GR, "The Text of an Orientation Workshop in Automated Instruction."	USCONARC	Jul 62	Dr. Melching Dr. Cox Dr. Rupe Dr. Smith	
TEXTRUCT II	Conduct of two-week workshops in Programmed Instruction to train programmers at Forts Benning, Lee, and Bliss.	USCONARC	Oct-Nov 62	Dr. Melching Dr. Rupe Dr. Kubala Mr. Christensen	132
TEXTRUCT II	Consultation on evaluating ARADSCH-produced auto-instructional program, developed by student of ADHRU Workshop.		May 63	Dr. Melching	
UPSTREAM System (TMD)	Participation in Electronic Industries Association, M-S-7 Human Factors Subcommittee on Development of a DOD-Wide Human Factors Specification.		Jul 62 (Continuing)	Dr. Rupe, ADHRU Dr. McKnight, TMD Mr. Butler, TMD	
Not Task-Related	Consultation on preparation of brochure on training quality control, "End-of-Course Qualification Test."	ARADSCH at request of USCONARC	Aug 62	Dr. Rupe	
Not Task-Related	Presentation of paper on Technology of Training at ATRC Conference on training evaluation at Lowry AFB.	ATRC	Sep 62	Dr. Smith	3
VIGIL	Provision of information on optimum length of radar watch, and optimum radar symbology.	USAADCDA	Sep 62	Mr. Wright Mr. Lehr	
RADAR VI MAINTRAIN I	Consultation to improve the teaching of basic electronics.	Asst. Comdt., ARADSCH	Oct 62		
MAINTRAIN	Consultation at Bell Telephone Laboratories on application of MAINTRAIN techniques to Zeus (A-VIS).	Zeus Project Office, Bell Telephone Labs.	Oct 62	Dr. Rogers	

(Continued)

Table 6 (Continued)

## U.S. Army Air Defense Human Research Unit

Task or Activity	Nature of TAS	Requesting Agency	Date	Advisory Personnel	Time Expended (days)
Not Task-Related	Preparation of proposed method for evaluation of A-VIS.	USARADBD	Nov 62	Dr. Baldwin Dr. Rogers	1
PIONEER V	Consultation and work on ARO Committee on STINFO.	ARO	Nov-Dec 62	Dr. Rogers	
SAMOFF III SAMOFF IV	Briefing on SAMOFF research given at Redstone Arsenal for USAOGMS.	Comdt., USAOGMS	Dec 62	Dr. Haverland Dr. Ammerman	6
TEXTSTRUCT	Obtained permission for an Army contractor to reproduce, for internal plant use, "Pocketschool Series, Mathematics I-VII" developed and published by ADHRU.	The Martin Co., Orlando, Fla.	Feb. 63		
UPSTREAM III MAINTRAIN V	Consultation on correction of inadequacy of Preliminary MAULER Task and Skill Analysis (TASA) produced by contractor. Preparation of sample TASA on Hawk to aid contractor.	ARADSCB	Apr 63	Dr. Baldwin Dr. Rupe Dr. Cox Mr. Thorne Mrs. Harris	10
Not Task-Related	Service on Ad Hoc Committee to examine BCT to align it with needs of basic soldier.	USCONARC	May 63	Dr. Cox, ADHRU Dr. Taylor, LHRU Dr. Snyder, LHRU Dr. Showel, LHRU Dr. Whitmore, AHRU Dr. Ward, LHRU	5 (each man)
UPSTREAM III System	Participation in ARO-chaired committee composed of HUMPRO, APRO, HEL, AMC, formed to plan and execute the implementation of UPSTREAM III.	HFOR, ARO	May 63	Dr. Rupe Dr. McClelland Dr. McKnight	5
Not Task-Related	Evaluation of a Raytheon Manual on Hawk Functional Theory.	ARADSCB	Oct 62	Mr. Thorne	2
Not Task-Related	Participation in Conference re digital computer training device.	ARADSCB	Nov 62	Dr. Cox	2

(Continued)



Table 6 (Continued)

## U.S. Army Air Defense Human Research Unit

Task or Activity	Nature of TAS	Requesting Agency	Date	Advisory Personnel	Time Expended (days)
Not Task-Related	Consultation re functional context training. Review of lesson plans.	ARADSGH	May 63	Dr. Rogers	.5
LOCK-ON	Consultation re on-the-job training programs and job aids, and run-down on LOCK-ON.	The Martin Co., Orlando, Fla.	May 63	Dr. Rogers Dr. Baldwin Sgt. Daley	.5
VIGIL V	Meeting with USARADBD re maximum ambient noise levels permissible in radar operator vans.	USARADBD	Oct 62	Mr. Wright	.5
Not Task-Related	Determination of minimum math skills required for basic electronics and missile system instruction.	ARADSGH	Jun 63 (Continuing into FY 64)	Dr. Cox Mr. Montgomery	.15

Table 7

## U.S. Army Aviation Human Research Unit

Task or Activity	Nature of TAS	Requesting Agency	Date	Advisory Personnel	Time Expended (days)
Not Task-Related	Consultation with North American Aviation, Columbus, on Simulator Study for New Surveillance Aircraft.	USATRC	Jul 62	Mr. Wright	1.5
LOWENTRY	Seminar on Light Intensification and Night Vision at Mobility Command, Detroit Arsenal. Presentation of paper on "Pilot Information Requirements for Low Level Flying with Restricted Visibility."	Director of Engineering, AMC, St. Louis	Sep 62	Mr. Wright	3
Not Task-Related	Considerations for providing continuous AvnHRU TAS to USAATB by full-time assignment of personnel. USAATB has asked Test and Evaluation Command that funds be provided to AvnHRU for two professional employees to make this service possible. Action pending.	USAATB	Nov 62- Jan 63	Dr. Lyons Dr. Prophet Maj. Haid	
Not Task-Related	Consultation on continuing participation in human factors evaluation of prototype LOHs. Visits to three contractor plants. Coordination on plan of test.	USAATB	Nov 62- Jun 63 (Continuing)	Dr. Prophet Mr. Boyd Mr. Wright Maj. Haid Mr. Jolley	
LIFT	Study of proficiency evaluation procedures of the Department of Rotary Wing Training.	Director, Dept. of Rotary Wing Training	Dec 62- Jun 63 (Continuing)	Dr. Prophet Dr. Caro Mr. Boney Dr. Lyons	77 (professional) 255 (clerical and enlisted)
Not Task-Related	Assistance to USAPHS on warrant officer pre-flight training.	Comdt., USAPHS	Jan 63	Dr. Prophet Dr. Lyons	

(Continued)

Table 7 (Continued)

## U.S. Army Aviation Human Research Unit

Task or Activity	Nature of TAS	Requesting Agency	Date	Advisory Personnel	Time Expended (days)
Not Task-Related	(1) consultation on helicopter training and tactics.	Federal Systems Division, IBM	Jan 63	Mr. Wright Mr. Schultz Mr. Blohm Mr. Jolley	2.5
	(2) consultation on digital computers for helicopter operation.		Mar 63	Mr. Wright Mr. Pauley	
Not Task-Related	Consultation on target recognition from sensor returns.	IBM	Feb 63	Dr. Thomas Mr. Wright Mr. Jolley Mr. Blohm	14
Not Task-Related	Evaluation of Aviation Training Device, 2-B-12A. At the request of USNTDC, the AvnHRRU took part in further evaluations of this device and suggested certain modifications. Further evaluation of the revised prototype will follow.	USAATD	Feb 63	Dr. Prophet Mr. Boney	
OBSERVE I	Elaboration of information on OBSERVE I.	Canadian Army Operational Research Establishment, Ottawa, Ontario, Canada	Mar 63	Dr. Thomas	14
Not Task-Related	Review of document, "A Mathematical Model for the Visual Detection of Low Flying Aircraft."	USATRC	Mar 63	Dr. Thomas Mr. Wright Dr. Lyons	2
Not Task-Related	Assistance on LOH vs. fixed wing study. Preparation of paper drawing upon past research for information relevant to LOH study.	USAAVNGDA	Mar-Apr 63 (Continuing)	Dr. Lyons Dr. Prophet Dr. Thomas Mr. Wright Mr. Waller	5.5
OBSERVE I-II	Preparation and presentation of a lecture on visual search techniques for personnel of 73rd Aviation Co. prior to shipment to USARPAC. The programmed materials for observer training developed in OBSERVE II were used to train some of the personnel of the 73rd Aviation Co.	G-3, Fort Rucker	Apr-May 63	Dr. Thomas Pfc Reese Mr. Jolley	4.5

(Continued)

Table 7. (Continued)

## U.S. Army Aviation Human Research Unit

Task or Activity	Nature of TAS	Requesting Agency	Date	Advisory Personnel	Time Expended (days)
Not Task-Related	Assistance in preparation of briefing for Asst. Secy. of Army for Logistics and Facilities.	USAAVNS	Apr 63	Dr. Lyons Dr. Prophet Mr. Wright	1.5
Not Task-Related	Assistance in connection with Fixed Wing Warrant Officer Candidate Course—Measurement of leadership and self-initiated drop-out training.	USAAVNS	Apr 63	Dr. Prophet Mr. Boyd Mr. Boney Mr. Jolley	5
Not Task-Related	Assistance in evaluation of off-the-shelf rotary wing aircraft trainers programmed from Jun through Oct 63.	Comdt., USAAVNS	May 63 (Continuing)	Mr. Wright Mr. Boyd	5
Not Task-Related	Review of SDRs—Pilot's Clip Board, Rear View Mirrors for Helicopters.	USAAVNCDA	May 63	Mr. Wright Dr. Prophet Maj. Haid	
Not Task-Related	Attendance at and participation in training device conference at Fort Rucker.	USAAVNS	Jun 63	Maj. Haid Dr. Prophet Dr. Caro	3
Not Task-Related	Brief consultations and/or correspondence providing published reports of research by-products, e.g., slides, training materials, etc.	Various Army installations, British Linson Officer, and industry	Jul 62- Jun 63 (Six meetings)	Dr. Lyons Dr. Thomas Mr. Wright Mr. Blohm	
All Tasks	Consultations on a great variety of subjects drawing upon specific research results, experience, and expertise of professional staff. Includes requested briefings.	Various Army and other military agencies, representatives of Allied Military at request of Army, industry, and other professional and nonprofessional agencies	Jul 62- Jun 63 (38 meetings)	All professional staff.	
LIFT-IV	Preparation and publication of GR, "A System of Flight Training Quality Control and Its Application to Helicopter Training."	USCONARC	Jun 63	Mr. Duffy Dr. Colgan	

**Table 3**  
**Action Briefings in FY 1963**

Division	Task	Date	Location	Presented by	Reference for Recommendations
TMD	JOBTRAIN IV	19 Sept 62	USASESCS	Mr. Gebhard	TMD JOBTRAIN Files
TMD	NICORD I	12 Dec 62	HQ USCONARC	Dr. McKnight	Progress Report on Task NICORD
AHRU	UNIT II	26 Mar 63	HQ USCONARC	Dr. Baker Col. Spiren	Briefing, HumRRO File
LHRU	TRANSITION I	2 Nov 62	DCSIT, HQ USCONARC	Dr. Snyder Dr. Caylor	Task Paper by R. Snyder and J.S. Caylor, Feb 63
		13 Dec 62	DCSPER, DA staff	Dr. Snyder Dr. Caylor	Briefing DCSPER 13 Dec 62
ADHRU	UPSTREAM III	27 Aug 62	HQ USCONARC	Dr. Rupe	TR 83 Apr 63
		19 Nov 62	HQ USACDC, and staff of USAAMC and OCP	Dr. Rupe	TR 83 Apr 63
		6 Dec 62	GRD and staff	Dr. McClelland	TR 83 Apr 63
		14 Dec 62	DA staff	Dr. Rupe	TR 83 Apr 63
		16 Aug 62	U.S. Army School Commandants Conference, USCONARC	Dr. Crawford	Director's Files
D.O.	"Role of HumRRO as it Relates to the School System"	16 Aug 62	U.S. Army School Commandants Conference, USCONARC	Dr. Crawford	Director's Files
D.O.	"The Role of HumRRO in Relation to the ATC's (U)"	21 Mar 63	U.S. ATC Com- manders Con- ference, Fort Jackson, S.C.	Dr. Crawford	Director's Files

# KEY TO ABBREVIATIONS IN TABLES

AFB	Air Force Base	USAADCCA	U.S. Army Air Defense Command Development Agency, Fort Bliss, Tex.
ALAT	Army Language Aptitude Test	USAAMC	U.S. Army Artillery and Missile Center, Fort Sill, Okla.
AMC	Army Materiel Command	USAARMBO	U.S. Army Armor Board, Fort Knox, Ky.
APRO	Army Personnel Research Office, Washington, D.C.	USAARMC	U.S. Army Armor Center, Fort Knox, Ky.
ARADSCH	U.S. Army Air Defense School, Fort Bliss, Tex.	USAARMCOA	U.S. Army Armor Combat Developments Agency, Fort Knox, Ky.
ARO	Army Research Office, Arlington, Va.	USAARMS	U.S. Army Armor School, Fort Knox, Ky.
ATC	Army Training Center	USAATB	U.S. Army Aviation Test Board, Fort Rucker, Ala.
ATP	Army Training Program	USAAVNCA	U.S. Army Aviation Combat Developments Agency, Fort Rucker, Ala.
ATRC	Air Training Command, Randolph AFB, Tex.	USAAVNS	U.S. Army Aviation School, Fort Rucker, Ala.
A-VIS	Audio-Visual Information System	USACDC	U.S. Army Combat Developments Command, Fort Belvoir, Va.
BCT	Basic Combat Training	USAIB	U.S. Army Infantry Board, Fort Benning, Ga.
CDCIA	Combat Developments Command, Infantry Agency, Fort Benning, Ga.	USAICDA	U.S. Army Infantry Combat Developments Agency, Fort Benning, Ga.
COMTRALANT	Commander, Training Command, U.S. Atlantic Fleet, Norfolk, Va.	USAINTC	U.S. Army Intelligence Center, Fort Holabird, Md.
CORG	Combat Operation Research Group	USAIS	U.S. Army Infantry School, Fort Benning, Ga.
CRD	Chief of Research & Development, Department of the Army, The Pentagon, Washington, D.C.	USALS	U.S. Army Language School, Washington, D.C.
DA	Department of the Army, The Pentagon, Washington, D.C.	USAOGMS	U.S. Army Ordnance Guided Missile School, Redstone Arsenal, Ala.
DCSIT	Deputy Chief of Staff for Individual Training, HQ USCONARC, Fort Monroe, Va.	USAOMC	U.S. Army Ordnance Missile Command, Redstone Arsenal, Ala.
DCSPER	Deputy Chief of Staff for Personnel, Department of the Army, The Pentagon, Washington, D.C.	USAPHS	U.S. Army Primary Helicopter School, Fort Wolters, Tex.
DLI	Defense Language Institute, Washington, D.C.	USARADBD	U.S. Army Air Defense Board, Fort Bliss, Tex.
DLI, WCB	Defense Language Institute, West Coast Branch, Presidio of Monterey, Calif.	USARAL	U.S. Army, Alaska
D.O.	Director's Office (HumRRO), Alexandria, Va.	USAREUR	U.S. Army, Europe
DOD	Department of Defense, The Pentagon, Washington, D.C.	USARPAC	U.S. Army, Pacific
HEL	Human Engineering Laboratories, Aberdeen Proving Ground, Md.	USASCS	The U.S. Army Signal Corps Center and School, Fort Monmouth, N.J.
HFORD	Human Factors and Operations Research Division, Washington, D.C.	USASESCS	U.S. Army Southeastern Signal School, Fort Gordon, Ga.
IBM	International Business Machines	USASWC	U.S. Army Special Warfare Center, Fort Bragg, N.C.
LOH	Light Observation Helicopter	USASWS	U.S. Army Special Warfare School, Fort Bragg, N.C.
MET	Management Engineering Training	USATC	U.S. Army Training Center
OCP	Office of Civilian Personnel, Department of the Army, The Pentagon, Washington, D.C.	USATC Armor	U.S. Army Training Center, Armor, Fort Knox, Ky.
ODCSOPS	Office of Deputy Chief of Staff for Military Operations, Department of the Army, The Pentagon, Washington, D.C.	USATRC	U.S. Army Transportation Research Command, Fort Eustis, Va.
OrdCorps	Ordnance Corps	USCONARC	U.S. Continental Army Command, Fort Monroe, Va.
PI	Programmed Instruction	USMA	U.S. Military Academy, West Point, N.Y.
POI	Program of Instruction	USNTDC	U.S. Naval Training Devices Center, Port Washington, N.Y.
SDR	Small Development Requirement	WAC	Women's Army Corps, The Pentagon, Washington, D.C.
SigC	Signal Corps		
STINFO	Information Retrieval System		
TC	Army Training Circular		
TRALANT	Training Command, U.S. Atlantic Fleet, Norfolk, Va.		

REPORT ON TECHNICAL ADVISORY  
SERVICES FOR FISCAL YEAR 1963

J. C. Ruge

Human Resources Research Office  
(Director's Office), March 1964

DATE

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